

**DECLARATION  
and POWER OF ATTORNEY**

- ☒ ORIGINAL  
☐ CONTINUATION  
☐ DIVISIONAL

As a below named inventor, I declare that the information given herein is true, that I believe that I am the original, first and sole inventor (if only one name is listed as I below) or an original first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**MICRO-CAVITY LASER**

the specification of which is attached hereto unless the following box is checked:

☐ was filed on \_\_\_\_\_ as United States Patent Application Number \_\_\_\_\_ or PCT International Application Number \_\_\_\_\_

and was amended on \_\_\_\_\_

My residence, post office address and citizenship are as stated below next to my name.

I acknowledge my duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations §1.56(a).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

N/A

COUNTRY	APPLICATION NUMBER	DATE OF FILING Month Day Year	PRIORITY CLAIMED UNDER 35 U.S.C. 119
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I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

**60/188,325**

**09 MARCH 2000**

(Application Serial No.)

(Filing Date)

(Status)

(Application Serial No.)

(Filing Date)

(Status)

**POWER OF ATTORNEY:** As a named Inventor, I hereby appoint the following attorney(s) and/or Agents(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith **SCOTT MILLER, Reg. No. 32,278, SHARMINI N. GREEN, Reg. No. 41,410 and DENNIS S. MORRIS, Reg. No. 38,975**

Send correspondence to:

**Scott R. Miller, Esq.  
Riordan & McKinzie  
300 South Grand Avenue, 29th Floor  
Los Angeles, CA 90071**

DIRECT TELEPHONE CALLS TO:

**Scott R. Miller, Esq.  
(213) 229-8536**

(Please Print)

1	Name of Inventor <b>Oskar Painter</b>	Residence: CITY <b>Pasadena</b>	STATE or COUNTRY <b>California, USA</b>
	Post Office Address <b>180 S. Catalina, #10</b>		CITIZENSHIP <b>Canadian</b>
2	Name of Inventor <b>Ming Cai</b>	Residence: CITY <b>Pasadena</b>	STATE or COUNTRY <b>California, USA</b>
	Post Office Address <b>171 North Wilson Avenue #208</b>		CITIZENSHIP
3	Name of Inventor <b>Kerry J. Vahala</b>	Residence: CITY <b>San Gabriel</b>	STATE or COUNTRY <b>California, USA</b>
	Post Office Address <b>328 Bridge Street</b>		CITIZENSHIP <b>USA</b>
4	Name of Inventor <b>Peter C. Sercel</b>	Residence: CITY <b>Pasadena</b>	STATE or COUNTRY <b>California, USA</b>
	Post Office Address <b>380 S. Allen Avenue</b>		CITIZENSHIP <b>USA</b>

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 1	SIGNATURE OF INVENTOR 2
DATE	DATE
SIGNATURE OF INVENTOR 3	SIGNATURE OF INVENTOR 4
DATE	DATE

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(d))—NONPROFIT ORGANIZATION**

Docket Number (Optional)  
6/081

Applicant or Patentee: Oskar PAINTER, et al.  
Serial or Patent No.: \_\_\_\_\_  
Filed or Issued: \_\_\_\_\_  
Title: MICRO-CAVITY LASER

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF NONPROFIT ORGANIZATION CALIFORNIA INSTITUTE OF TECHNOLOGY

ADDRESS OF NONPROFIT ORGANIZATION 1200 East California Boulevard, Pasadena, California 91125, USA

TYPE OF NONPROFIT ORGANIZATION:

- ☐ UNIVERSITY OR OTHER INSTITUTION OF HIGHER EDUCATION
- ☐ TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE (26 U.S.C. 501(a) and 501(c)(3))
- ☐ NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE OF STATE OF THE UNITED STATES OF AMERICA  
(NAME OF STATE \_\_\_\_\_)  
(CITATION OF STATUTE \_\_\_\_\_)
- ☐ WOULD QUALIFY AS TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE (26 U.S.C. 501(a) AND 501(c)(3))  
IF LOCATED IN THE UNITED STATES OF AMERICA
- ☐ WOULD QUALIFY AS NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE OF STATE OF THE UNITED  
STATES OF AMERICA IF LOCATED IN THE UNITED STATES OF AMERICA  
(NAME OF STATE \_\_\_\_\_)  
(CITATION OF STATUTE \_\_\_\_\_)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees to the United States Patent and Trademark Office regarding the invention described in:

- ☐ the specification filed herewith with title as listed above.
- ☐ the application identified above.
- ☐ the patent identified above.

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization regarding the above identified invention. If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements swearing to their status as small entities and that no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a non profit organization under 37 CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

- ☐ no such person, concern, or organization exists.
- ☐ each such person, concern or organization is listed below.

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Kerry Vahala, Professor

TITLE IN ORGANIZATION OF PERSON SIGNING CALIFORNIA INSTITUTE OF TECHNOLOGY

ADDRESS OF PERSON SIGNING 1200 East California Boulevard, Pasadena, California 91125, USA

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**

Docket Number 6.081

Applicant, Patentee, or Identifier: Oskar PAINTER, Ming CAI, Kerry VAHALA and Peter C. SERCEL

Application or Patent No.: \_\_\_\_\_

Filed or Issued: 09 March 2001

Title: MICRO-CAVITY LASER

I hereby state that I am

- ☐ the owner of the small business concern identified below:
- ☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN ALEPH LIGHTGATE CORPORATION

ADDRESS OF SMALL BUSINESS CONCERN 427 E. Huntington Drive  
Monrovia, California 91016  
United States of America

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office. Questions related to size standards for a small business concern may be directed to: Small Business Administration, Size Standards Staff, 409 Third Street, SW, Washington, DC 20416.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- ☒ the specification filed herewith with title as listed above.
- ☐ the application identified above.
- ☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization having any rights in the invention is listed below:

- ☐ no such person, concern, or organization exists.
- ☒ each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING Peter C. Sercel

TITLE OF PERSON IF OTHER THAN OWNER President

ADDRESS OF PERSON SIGNING 427 E. Huntington Drive  
Monrovia, California 91016  
United States of America

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

# ASSIGNMENT

(1-8) *Insert Name(s) of Inventor(s)*

(1) Oskar PAINTER (5)  
 (2) Ming CAI (6)  
 (3) Kerry VAHALA (7)  
 (4) Peter C. SERCEL (8)

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(9) *Insert name of Assignee*

(9) CALIFORNIA INSTITUTE OF TECHNOLOGY

(10) *Insert state of Incorporation of Assignee*

(10) A California Corporation

(11) *Insert address of Assignee*(11) of 1200 East California Boulevard  
Pasadena, California 91124, USA

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(12) *Insert identification of Invention, such as Title, Case Number or Foreign Application Number*

(12) MICRO-CAVITY LASER

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

(13) *Insert Date of Signing of Application*

(13) on

1) The undersigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and continuing United States and foreign applications for the above-identified invention and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed any agreement in conflict herewith.

6) The undersigned hereby appoints SCOTT MILLER, Reg. No. 32,278, SHARMINI N. GREEN, Reg. No. 41,410 and DENNIS S. MORRIS, Reg. No. 38,975 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date

Signature of Inventor  
Oskar PAINTER

Date

Signature of Inventor  
Ming CAI

Date

Signature of Inventor  
Kerry VAHALA

Date

Signature of Inventor  
Peter C. SERCEL

# ASSIGNMENT

(1-8) *Insert Name(s) of Inventor(s)*

- |     |                        |     |
|-----|------------------------|-----|
| (1) | <b>Oskar PAINTER</b>   | (5) |
| (2) | <b>Ming CAI</b>        | (6) |
| (3) | <b>Kerry VAHALA</b>    | (7) |
| (4) | <b>Peter C. SERCEL</b> | (8) |

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(9) *Insert name of Assignee*

(9) **ALEPH LIGHTGATE CORPORATION**

(10) *Insert state of Incorporation of Assignee*

(10) A California Corporation

(11) *Insert address of Assignee*

(11) of 427 E. Huntington Drive  
Monrovia, California 91016  
United States of America

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(12) *Insert identification of Invention, such as Title, Case Number or Foreign Application Number*

(12) **MICRO-CAVITY LASER**

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

(13) *Insert Date of Signing of Application*

(13) on

1) The undersigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and continuing United States and foreign applications for the above-identified invention and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

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Date	_____	Signature of Inventor <b>Oskar PAINTER</b>	_____
Date	_____	Signature of Inventor <b>Ming CAI</b>	_____
Date	_____	Signature of Inventor <b>Kerry VAHALA</b>	_____
Date	_____	Signature of Inventor <b>Peter C. SERCEL</b>	_____